

establishing the unacceptable schedule as a current schedule;

calculating a score for the current schedule;

repairing one or more constraint violations of the current schedule by modifying the current schedule without relaxing the set of pre-defined constraints;

determining a revised schedule from the schedule modification or modifications made by the constraint violation repair or repairs;

calculating a score for the revised schedule;

selecting one of the revised schedule or the current schedule as a new current schedule based upon a comparison of the score of the revised schedule and the score of the current schedule;

repeating, until a predetermined condition is met, the steps of repairing one or more constraint violations of the current schedule, determining a revised schedule, calculating a score for the revised schedule, and selecting one of the revised schedule or the current schedule as the new current schedule; and

selecting one of the revised schedules as the final schedule.

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12. (Twice Amended) A system for scheduling a complex activity that is governed by a set of pre-defined constraints including consumable resource constraints, wherein an unacceptable schedule exists for the activity, comprising:

a memory device, wherein:

the memory device is capable of storing an unacceptable initial schedule that is supplied to the system;

the memory device stores information regarding each of the constraints; and

the memory device is capable of storing one or more revised schedules produced by the system; and a processing device, wherein:

the processing device is capable of calculating a score for each schedule;

the processing device is capable of repairing one or more constraint violations for each schedule by modifying the schedule without relaxing the set of pre-defined constraints;

the processing device is capable of determining each revised schedule from the schedule modification or modifications made by the constraint violation repair or repairs;

the processing device is capable of selecting one of the revised schedule or the current schedule as a new current schedule based upon a comparison of the score of the revised schedule and the score of the current schedule; and

the processing device is capable of selecting one of the schedules as the final schedule determined by the system.

20. (Amended) A computer readable medium encoded with one or more computer programs for enabling scheduling of a complex activity that is governed by a set of pre-defined constraints including consumable resource constraints, comprising:

instructions for establishing an unacceptable initial schedule as a current schedule;

instructions for calculating a score for the current schedule;

instructions for repairing one or more constraint violations of the current schedule by modifying the current schedule without relaxing the set of pre-defined constraints;

instructions for determining a revised schedule from the schedule modification or modifications made by the constraint violation repair or repairs;

instructions for calculating a score for the revised schedule;

instructions for selecting one of the revised schedule or the current schedule as a new current schedule based upon a comparison of the score of the revised schedule and the score of the current schedule;

instructions for causing repetition of, until a predetermined condition is met, the instructions for repairing one or more constraint violations of the current schedule, the instructions for determining a revised schedule, the instructions for calculating a score for the revised schedule, and the instructions for selecting one of